

ABSTRACT

A surface acoustic wave filter which has a balance-unbalance converting function and which can improve the degree of balance, and a communication apparatus including the filter are provided.

In a longitudinally-coupled-resonator surface acoustic wave filter unit 501 having a first interdigital transducer 503, a central interdigital transducer 504, a second interdigital transducer 505, and first and second reflectors 506 and 507 by which the interdigital transducers are provided therebetween, for one comb electrode of the central interdigital transducer 504, first and second comb electrodes 516 and 517, which are substantially symmetrically bisected along a surface-acoustic-wave propagation direction, are provided. Between the first and second comb electrodes 516 and 517, in one side and the other side around an imaginary central axis A assumed to be orthogonal to the surface-acoustic-wave propagation direction, a design parameter of at least one of the interdigital transducers 503, 504, and 505, and the reflectors 506 and 507 is set to differ.

(19) 世界知的所有権機関
国際事務局



(43) 国際公開日
2005年4月7日 (07.04.2005)

PCT

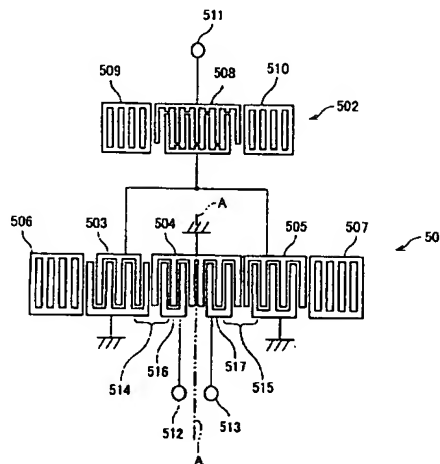
(10) 国際公開番号
WO 2005/031971 A1

- (51) 国際特許分類: H03H 9/64, 9/145 (72) 発明者: および
(21) 国際出願番号: PCT/JP2004/011908 (75) 発明者/出願人 (米国についてのみ): 高峰 裕一
(22) 国際出願日: 2004年8月19日 (19.08.2004) (TAKAMINE, Yuichi) [JP/JP]; 〒6178555 京都府長岡
(25) 国際出願の言語: 日本語 京市東神足1丁目10番1号 株式会社村田製作所
(26) 国際公開の言語: 日本語 内 Kyoto (JP).
(30) 優先権データ: 特願2003-332932 2003年9月25日 (25.09.2003) JP (74) 代理人: 宮▼崎▲主税, 外(MIYAZAKI, Chikara et
(71) 出願人 (米国を除く全ての指定国について): 株式 al.); 〒5400012 大阪府大阪市中央区谷町1丁目6番
会社村田製作所 (MURATA MANUFACTURING CO., 5号 西村ビル Osaka (JP).
LTD.) [JP/JP]; 〒6178555 京都府長岡京市東神足1丁 (81) 指定国 (表示のない限り、全ての種類の国内保護が
目10番1号 Kyoto (JP). 可能): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR,
BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU,
ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,
LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA,

/続葉有/

(54) Title: SURFACE ACOUSTIC WAVE FILTER AND COMMUNICATION UNIT

(54) 発明の名称: 弾性表面波フィルタ及び通信機



(57) Abstract: A surface acoustic wave filter having a balance/unbalance converting function for improving the degree of balance, and a communication unit comprising it. A longitudinal coupling resonator type surface acoustic wave filter section (501) comprises a first interdigital electrode part (503), a central interdigital electrode part (504), a second interdigital electrode part (505), and first and second reflectors (506, 507) sandwiching them. One comb-shaped electrode at the central interdigital electrode part (504) is divided substantially symmetrically into first and second comb-shaped electrodes (516, 517) along the propagating direction of surface acoustic wave. Between the first and second comb-shaped electrodes (516, 517), at least one of design parameters of the interdigital electrode parts (503, 504, 505) and the reflectors (506, 507) is differentiated between one and the other sides sandwiching an imaginary central axis A orthogonally intersecting the propagating direction of surface acoustic wave.

(57) 要約: 平衡-不平衡変換機能を有し、平衡度を改善することができる弾性表面波フィルタおよびそれを有する通信機を提供する。第1くし型電極部503、中央くし型電極部504及び第2くし型電極部505と、それらを挟む第1、第2リフレクタ506、507とを有する縦結合共振子型弾性表面波フィルタ部501、中央くし型電極部504の一方のくし歯状電極に、弾性表面

/続葉有/